



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/607,885	06/27/2003	Scott L. Titus	RA 5557 (USYS.o69PA)	7228

27516 7590 07/17/2006

UNISYS CORPORATION
MS 4773
PO BOX 64942
ST. PAUL, MN 55164-0942

EXAMINER

CHANNAVAJJALA, SRIRAMA T

ART UNIT	PAPER NUMBER
----------	--------------

2166

DATE MAILED: 07/17/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/607,885	Applicant(s) TITUS ET AL.	
	Examiner Srirama Channavajjala	Art Unit 2166	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _____ MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 June 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Claims 1-21 are pending in this application.
2. Examiner acknowledges applicant's amendment filed on 6/6/2006.
3. Claims 1,714,15,16 have been amended [6/6/2006].

Drawings

4. The Drawings filed on 6/27/2003 are acceptable for examination purpose.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

5. ***Claims 1-21 are rejected under 35 U.S.C. 101 because invention is directed to non-statutory subject matter.***

As set forth in MPEP 2106(II)A:

Identify and understand Any Practical Application Asserted for the Invention The claimed invention as a whole must accomplish a practical application. That is, it must produce a "useful, concrete and tangible result." State Street, 149 F.3d at 1373, 47USPQ2d at 1601-02. The purpose of this requirement is to limit patent protection to inventions that possess a certain level of "real world" value, as opposed to subject matter that represents nothing more than an idea or concept, or is simply a starting point for future investigation or research (Brenner v. Manson, 383 U.S. 519, 528-36, 148 USPQ 689, 693-96); In re Ziegler, 992, F.2d 1197, 1200-03, 26 USPQ2d 1600,

Art Unit: 2166

1603-06 (Fed. Cir. 1993)). Accordingly, a complete disclosure should contain some indication of the practical application for the claimed invention, i.e., why the applicant believes the claimed invention is useful.

Apart from the utility requirement of 35 U.S.C. 101, usefulness under the patent eligibility standard requires significant functionality to be present to satisfy the useful result aspect of the practical application requirement. See *Arrhythmia*, 958 F.2d at 1057, 22 USPQ2d at 1036. Merely claiming nonfunctional descriptive material **stored in a computer-readable medium does not make the invention eligible for patenting.** For example, a claim directed to a word processing **file stored on a disk may satisfy the utility** requirement of 35 U.S.C. 101 since the information stored may have some **“real world”** value. However, the mere fact that the claim may satisfy the utility requirement of 35 U.S.C. 101 **does not mean that a useful result is achieved under the practical application requirement. The claimed invention as a whole must produce a “useful, concrete and tangible” result to have a practical application**

6. Regarding claims 1,15-16, “A computer-implemented method for expanding usable space for an application data file, comprising:

Maintaining in a control file first and second control structures and first and second pointers to the first and second control structures, respectively, for the daa file, wherein the first structure includes a plurality of pointers that respectively reference a plurality of bit maps that indicate available and allocated portions of usable space in the

Art Unit: 2166

data file, and the second structure contains respective values that indicate quantities of available space in portions of the data file;

limiting access to the first and second control structures to only a process that is expanding the data file while the process is expanding the data file;

allocating space for new versions of the first and second control structures in the control file;

copying contents of the first and second control structures to space for the new versions of the first and second control structures; and

updating the first and second pointers to reference the new versions of the first and second control structures” is directed to “abstract idea” because all of the elements in the claim 1 would reasonably be interpreted by one of ordinary skill in light of the disclosure as software, such that method of storing data into a database related to generating the schema [data structure] steps is software, per se, is “non-statutory subject matter” and **claim 1,15-16** do not have “practical application” because the “final result” by the claimed invention in the claim 1 elements particularly “allocating space for new versions of the first and second control structures....copying contents of the first and second control structures.....updating the first and second pointers to reference the new versions of the first and second control structures” merely code or instructions or a data structure [*the IEEE definition of which can be found in the Interim Guidelines, Annex IV, page 50, and the in MPEP 2106*], or merely non-functional descriptive material for example data or non-functional arrangement of data structure but not producing “**useful, tangible and concrete**” result, therefore, claim 1 is a non-statutory

Art Unit: 2166

subject matter. The claimed invention is subject to the test of State Street, 149 F.3d at 1373-74, 47 USPQ2d at 1601-02. Specifically State Street sets forth that the claimed invention must produce a ***“useful, concrete and tangible result.”*** The Interim **Guidelines for Examination of Patent Applications for Patent Subject Matter Eligibility** states in section IV C. 2 b. (2) (on page 21 in the PDF format):

The tangible requirement does not necessarily mean that a claim must either be tied to a particular machine or apparatus or must operate to change articles or materials to a different state or thing. However, the tangible requirement does require that the claim must recite more than a § 101 judicial exception, in that the process claim must set forth a practical application of that § 101 judicial exception to produce a real-world result. Benson, 409 U.S. at 71-72, 175 USPQ at 676-77 (invention ineligible because had “no substantial practical application.”).

Claims 1,15-16 have the result of producing ***“real-world”*** results related to “allocating space for new versions of the first and second control structures....copying contents of the first and second control structures.....updating the first and second pointers to reference the new versions of the first and second control structures” , however the claims do not specify that the result (data structure ie., updating the first and second pointers to reference the new versions of the first and second control structures) neither displayed nor outputted to a user or otherwise used in the real world, furthermore, no *use of* updating the first and second pointers to reference the new versions of the first and second control structures is set forth that would constitute a real-world result.

Art Unit: 2166

Thus the claimed result is not tangible and thus the claimed result is not a **“useful, concrete and tangible result.”** The court in *State Street* noted that the claimed invention in *Alappat* constituted a practical application of an abstract idea because it produced *a useful, concrete and tangible result* the display of a smoothed heart beat to a system user. The Federal Circuit further ruled that it is of little relevance whether a claim is directed to a machine or process for the purpose of a § 101 analysis. *AT&T*, 172 F.3d at 1358, 50 USPQ2d at 1451 (see the Interim Guidelines for Examination of Patent Applications for Patent Subject Matter Eligibility, Annex II).

The examiner reviewed the specification ,page 4-12 but was unable to find a practical real-world use of the result. If the applicant is able to find one and inserts it into the claims provide the location the element[s] is found in the specification.

In view of above analysis of claims 2-6,17-21 depend from claim 1,16 is also rejected

7. Regarding claims 7,14, is directed to “A computer-implemented method for expanding usable space for an application data file, comprising:

Maintaining an in-memory copy of one or more selected control structures from a control file while the application data file is available for access, wherein the application file is logically divided into a plurality of equal-size cells, and each cell provides storage for one or more records of data;

Maintaining in the control file a first structure that contains pointers to second and third structures in the control file, wherein the second structure includes a plurality of

Art Unit: 2166

pointers that respectively reference bit maps of the cells of the application file, each bit map indicating available and allocated records in the cell, and the third structure contains respective values that indicate quantities of available space in the cells, and;

locking the first and third structures within the control file;

Allocating in the control file space for a fourth structure and space for a fifth structure, wherein the space allocated for the fourth structure is greater than space occupies by the second structure, and the space allocated for the fifth structure is greaer than space occupied by the third structure;

Copying data from the second structure to the fourth structure and data from the third structure to the fifth structure;

Updating in the first structure respective pointers to the second and third structures to reference the fourth and fifth structure, respectively; and

Unlocking the first structure and the third structure after the pointers have been updated"

is directed to "abstract idea" because all of the elements in the claim 7,14 would reasonably be interpreted by one of ordinary skill in light of the disclosure as software, such that method o storing data into a database related to generating the schema [data structure] steps is software, per se , is "non-statutory subject matter" and **claim 7,14** do not have "practical application" because the "final result" by the claimed invention in the claim 7,14 elements particularly "copying data from the second structure to forth structure and data from the third structure to the fifth structure; updating in the first structure.....unlocking the first structure and the third structure after the pointers have

Art Unit: 2166

been updated” merely code or instructions or a data structure [*the IEEE definition of which can be found in the Interim Guidelines, Annex IV, page 50, and the in MPEP 2106*], or merely non-functional descriptive material for example data or non-functional arrangement of data structure but not producing “**useful, tangible and concrete**” result, therefore ,claim 1 is a non-statutory subject matter. The claimed invention is subject to the test of State Street, 149 F.3d at 1373-74, 47 USPQ2d at 1601-02.

Specifically State Street sets forth that the claimed invention must produce a “**useful, concrete and tangible result.**” The Interim Guidelines for Examination of Patent Applications for Patent Subject Matter Eligibility states in section IV C. 2 b. (2) (on page 21 in the PDF format):

The tangible requirement does not necessarily mean that a claim must either be tied to a particular machine or apparatus or must operate to change articles or materials to a different state or thing. However, the tangible requirement does require that the claim must recite more than a § 101 judicial exception, in that the process claim must set forth a practical application of that § 101 judicial exception to produce a real-world result. Benson, 409 U.S. at 71-72, 175 USPQ at 676-77 (invention ineligible because had “no substantial practical application.”).

Claims 7,14 have the result of producing “**real-world**” results related to “copying data from the second structure to forth structure and data from the third structure to the fifth structure; updating in the first structure.....unlocking the first structure and the third structure after the pointers have been updated ”, however the claims do not specify that

Art Unit: 2166

the result (data structure ie., unlocking the first structure and the third structure after the pointers have been updated) neither displayed nor outputted to a user or otherwise used in the real world, furthermore, no *use of* “unlocking the first structure and the third structure after the pointers have been updated” is set forth that would constitute a real-world result. Thus the claimed result is not tangible and thus the claimed result is not a **“useful, concrete and tangible result.”** The court in State Street noted that the claimed invention in Alappat constituted a practical application of an abstract idea because it produced a *useful, concrete and tangible result* the display of a smoothed heart beat to a system user. The Federal Circuit further ruled that it is of little relevance whether a claim is directed to a machine or process for the purpose of a § 101 analysis. AT&T, 172 F.3d at 1358, 50 USPQ2d at 1451 (see the Interim Guidelines for Examination of Patent Applications for Patent Subject Matter Eligibility, Annex II).

The examiner reviewed the specification, page 4-12 but was unable to find a practical real-world use of the result. If the applicant is able to find one and inserts it into the claims provide the location the element[s] is found in the specification.

In view of above analysis of claims 8-13 depend from claim 7 is also rejected

For “General Analysis for Determining Patent-Eligible Subject Matter”, see 101 Interim Guidelines as indicated below.

<<<http://www.uspto.gov/web/offices/pac/dapp/ogsheet.html>>>

No new matter should be entered.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

8. Claims 1-6,14-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Loaiza et al. [hereafter Loaiza] US Patent No. 6549901 published on April 15, 2003 in view of Bailey US Pub No. 2004/0243535 filed on May 30,2003 and published on Dec 2, 2004

9. As to claims 1, 15-16, Loaiza teaches a system which including 'maintaining a control file first and second control structures and first and second pointers to the first and second control structures respectively, for the data file [fig 1, element 130, element

Art Unit: 2166

140, element 150, col 3, line 32-37, line 58-65] wherein the first structure includes a plurality of pointers that respectively, allocated portions of usable space in the data file [col 8, line 27-34], and the second structure contains respective values that indicate quantities of available space in portions of the data file'[col 7, line 44-47,col 8, line 35-42,fig 5];

'limiting access to the first and second control structures to only a process that is expanding the data file while the process is expanding the data file'[col 9, line 4-13];

'allocating space for first and second control structures in the control file' [col 8, line 60-67, col 9, line 1-3];

'copying contents of the first and second control structures to space' [col 10, line 27-28];

'updating the first and second pointers to reference the first and second control structures' [col 8, line 28-34, col 10, line 27-44]. It is however, noted that Loaiza does not specifically teach 'one or more bit maps, new versions of control file'. On the other hand, Bailey disclosed a plurality of bit maps' [page 4, 0029-0031], Bailey specifically teaches not only allocating bitmap to the respective pages but also bit map value indicate the status of page available or unavailable as detailed in page 4, 0029, further, allocation bitmap can be stored in the database file or table as detailed in page 4, 0031; , new versions of control file' [page 7, 0044, 0048], Bailey specifically suggests database header page tracks the activities of mapping table pages and in the event of new mapping table pages, data pages are assigned to new versions as detailed in page 7, 0044

It would have been obvious to one of the ordinary skill in the art at the time of applicant's invention to incorporate the teachings of Bailey into transportable tablespaces for hosting data of multiple users of Loaiza et al. because both Loaiza, Bailey are directed to databases, more specifically database structures [Bailey:page 1, 0007, fig 1, fig 3 Loaiza: fig 1], both Loaiza, Bailey are directed to data indexers [see Loaiza: col 11, line 46-48; Bailey: page 2, 0021(index key),

One of the ordinary skill in the art at the time of applicant's invention to incorporate the teachings of Bailey into transportable tablespaces for hosting data of multiple users of Loaiza et al. because that would have allowed users of Loaiza to select pages of the database file that are stored in unused pages of database file, maintaining such page status in database header including locations of pages in database file for further usage [Bailey: page 1, 0006], also allowing pages to be logically assigning identifiers that represents physical address is used to track and maintain pages of memory during shadow paging [page 2, 0022, line 1-6], also assigning bitmap value to pages i.e., logical ID allocation bitmap that indicates the status of mapping pages and current allocation status of pages [Bailey: page 4, 0030], thus improving concurrency by allowing multiple transactions [maintaining atomic transactions] to allocate and free page lds in a database at the same time as suggested by Bailey: page 4, 0032.

Art Unit: 2166

10. As to claim 2, 17,Loaiza disclosed 'maintaining in memory copies of the first and second pointers while the application data file is available for access' [col 4, line 10-18], Bailey disclosed 'updating the first and second pointers [page 3, 0023, line 20-27] to reference the new versions of the first and second control structures' [0048-0049].

11. As to claim 3, 18,Loaiza disclosed 'multi-host data processing arrangement for sharing the application data file, the method further comprises, after a first host completes expanding the data file, transmitting a message from the first host to each other host, wherein the message indicates that the file has been expanded' [col 5, line 30-39].

12. As to claim 4, 19,Loaiza disclosed 'determining whether the first structure is large enough to accommodate expansion of the data file by a requested amount' [col 8, line 60-67, col 9, line 1-3]; 'performing the steps of allocating, copying, and updating only if the first structure is not large enough to accommodate expansion of the data file by requested amount' [col 9, line 23-36].

13. As to claim 5-6, 20-21, Loaiza disclosed 'plurality of application programs share the data file and are hosted on a plurality of host data processing systems (hosts) [col 6, line 65-67, col 7, line 1], the method further comprising conditioning expansion of a file shared by the application program on whether each host is configured to detect expansion of the data file by another host' [col 7, line 28-30, col 8, line 5-12]

14. Claims 7-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Anfindsen, US Patent No. 6751617 filed on July 28, 2000 and published on June 15, 2004 in view of Loaiza et al. [hereafter Loaiza] US Patent No. 6549901 published on April 15, 2003.

15. As to claim 7, 14, Anfindsen teaches a system which including 'maintaining an in-memory copy of one or more selected control structures from a control file [col 1, line 14-18] while the application data file is available for access, wherein the application file is logically divided into a plurality of equal size cells, and each cell provides storage for one or more records of data [col 2, line 18-20, line 23-28, col 5, line 57-61];

'maintaining in the control file a first structure that contains pointers to second [col 7, line 5-8] and third structures in the control file, wherein the second structure includes a plurality of pointers that respectively reference bit maps of the cells of the application file'[col 7, line 15-24, the third structure contains respective values' [col 7, line 51-57, col 8, line 40-46];

'locking the first and third structures within the control file' [col 8, line 19-24, fig 3];

'copying data from the second structure to the fourth structure and data from the third structure to the fifth structure' [col 18, line 1-8];

'updating in the first structure respective pointers to the second and third structures to reference the fourth and fifth structures, respectively' [col 20, line 46-55];

'unlocking the first structure and the third structure after the pointers have been updated' [col 23, line 15-31]. It is however, noted that Anfindsen does not specifically

Art Unit: 2166

teach 'available space particularly, allocating in the control file space for a fourth structure and space for a fifth structure, wherein the space allocated for the fourth structure is greater than space occupied by the second structure, and the space allocated for the fifth structure is greater than space occupied by the third structure. On the other hand, Loaiza disclosed basic concepts of tablespace, more specifically table space to store data for a table or index in a database or relational database [col 3, line 24-25, line 38-42], further Loaiza also suggests tablespace through the use of database schema where database schema is a set of database objects [col 4, line 64-67].

It would have been obvious to one of the ordinary skill in the art at the time of applicant's invention to incorporate the teachings of Loaiza et al. into data structures for implementing nested database of Anfindsen because both Anfindsen, Loaiza are directed to database management, more particularly, database structures [see Anfindsen: Abstract; Loaiza: Abstract, fig 1]. Anfindsen also teaches multiple databases or multiple data structures or nested databases allows multiple users to access transactions.

One of the ordinary skill in the art at the time of applicant's invention to incorporate the teachings of Loaiza et al. into data structures for implementing nested database of Anfindsen because that would have allowed users of Anfindsen to assign required tablespace, further store a data for a user in particular tablespace depends on the requirements as suggested by Loaiza col 3, line 52-55, also allows to exporting data

Art Unit: 2166

for a particular user to another database system in a efficient manner as suggested by Loaiza [col 2, line 23-27].

16. As to claim 8, 10, Anfindsen disclosed 'locking the third structure' [col 11, line 22-35, fig 9]; 'comparing a control file version of the pointer to the control file version of third structure, to an in-memory version of the pointer to the control file version of the third structure' [col 11, line 40-49]; 'if the control file version and in-memory version of the pointer are not equal, then updating the in-memory versions of the pointers to the control file versions of the second and third structures, with the control file versions of the pointers to the control file versions of the second and third structures' [col 12, line 25-40]; 'copying the contents of the third structure in the control file to the in-memory version of the third structure' [col 12, line 52-62]; 'unlocking the third structure' [col 13, line 4-12].

17. As to claim 9, Loaiza disclosed 'multi-host data processing arrangement for sharing the application data file, the method further comprises, after a first host completes expanding the data file, transmitting a message from the first host to each other host, wherein the message indicates that the file has been expanded' [col 5, line 30-39].

18. As to claim 11, Loaiza disclosed 'determining whether the second structure is large enough to accommodate expansion of the data file by a requested amount' [col 8, line 60-67, col 9, line 1-3, line 6-13]; 'performing the steps of allocating, copying, and updating only if the second structure is not large enough to accommodate expansion of the data file by requested amount' [col 9, line 23-36, line 59-64].

19. As to claim 12-13, Loaiza disclosed 'plurality of application programs share the data file and are hosted on a plurality of host data processing systems (hosts) [col 6, line 65-67, col 7, line 1], the method further comprising conditioning expansion of a file shared by the application program on whether each host is configured to detect expansion of the data file by another host' [col 7, line 28-30, col 8, line 5-12]

Response to Arguments

Applicant's arguments filed on 6/6/2006 have been fully considered, and claims 1-6,14-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Loaiza et al. [US Patent No. 6549901 in view of Bailey US Pub No. 2004/0243535

a) At page 10, claims 1,15-16, applicant argues, "it is not apparent what elements of Loaiza are construed to correspond to values that indicate quantities of available space in portions of the data file. Not only is there no apparent reference to a quantity of space relative to a data file in the cited teachings, but there is no apparent reference to any tracking of available space in a data file"

As to the above argument [a], as best understood by the examiner, firstly, Loaiza is directed to a database system is configured to store data for users in separate "tablespace" is referred to as "repositories" [see Abstract], secondly, Loaiza specifically teaches database system containing multiple data files, and related multiple table spaces for example as detailed in fig 1 that corresponds to multiple control structures related to data files col 3, line 24-25, fig 1; furthermore, Loaiza also specifically suggests multiple databases for example "both source database and target database for copying tablespace and altering the database [col 3, line 58-65], thirdly, Loaiza also suggest tablespace associates with pointers because transportable table spaces particularly refers to pluggable tablespaces as detailed in col 3, line 64-65..

It is also noted that Loaiza also suggests each tablespace contains a control list of data files, each tablespace is assigned a tablespace number [col 8, line 60-65], also each table space contains a control list of data files identified as tablespace-relative file number, therefore, ordinary skill in the art would have appropriately identifies specific tablespace number and associated with control list of data files, but also tracks available tablespace in the event of copying or modifying [unpluggable or pluggable] as suggested by Loaiza [col 8, line 9-12, line 13-16].

b) At page 10, claims 1,15-16, applicant argues that Loaiza's table space 130 includes multiple data files. There is no apparent suggestion or indication of a control file'

As to the above argument, as best understood by the examiner, Loaiza specifically teaches database system containing multiple data files, and related multiple table spaces for example as detailed in fig 1 that corresponds to multiple control structures related to data files col 3, line 24-25, fig 1 because these data files not only integral part of tablespace, but also store data for table or index configured to indicate available table space [col 3, line 40-42].

Art Unit: 2166

c) At page 11-12, claims 7-14, applicant argues that references fails to provide a proper motivation for modifying the teachings of Anfindsen with teachings of Loaiza.

In response to applicant's argument at page 11, claim 7-14, that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, Anfindsen is directed to data structures, more specifically, data structures associated with transactions, particularly multiple users access to the data through different databases [see Abstract, col 2, line 3-7], Antindsen also teaches data structure related to data blocks, each data block associated with particular database [col 2, line 49-53]. Anfindsen also suggests multiple databases, each database having control blocks for example DB1, DB2....DBn [see fig 2] utilized to indicate database or sub database the lock or unlock control block. Antindsen further teaches pointer from subdatabases lock control block to subdatabase DB1 establishing relation between different data structures [col 7, line 15-24]. It is noted that Antindsen does not specifically teach available space particularly allocating in the control file space. On the other hand, Loaiza is directed to database system, more particularly, database system configured to store data for users in separate databases referred to as tablespace [see Abstract].also

Art Unit: 2166

Loaiza suggests "tablespace" is a collection of storage containers or data files used to store data for database objects, database objects including tables, indexes [col 3, line 24-31].

Therefore, it would have been obvious to one of the ordinary skill in the art at the time of applicant's invention to incorporate the teachings of Loaiza et al. into data structures for implementing nested database of Anfindsen because both Anfindsen, Loaiza are directed to database management, more particularly, database structures [see Anfindsen: Abstract; Loaiza: Abstract, fig 1]. Anfindsen also teaches multiple databases or multiple data structures or nested databases allows multiple users to access transactions.

one of the ordinary skill in the art at the time of applicant's invention to incorporate the teachings of Loaiza et al. into data structures for implementing nested database of Anfindsen because that would have allowed users of Anfindsen to assign required tablespace, further store a data for a user in particular tablespace depends on the requirements as suggested by Loaiza col 3, line 52-55, also allows to exporting data for a particular user to another database system in a efficient manner as suggested by Loaiza [col 2, line 23-27].

Conclusion

The prior art made of record

- | | | |
|----|---------------|--------------|
| a. | US Patent No. | 6549901 |
| b. | US Patent No. | 6751617 |
| c. | US Pub.No. | 2004/0243535 |

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Srirama Channavajjala whose telephone number is 571-272-4108. The examiner can normally be reached on Monday-Friday from 8:00 AM to 5:30 PM Eastern Time.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Alam, Hosain, T, can be reached on (571) 272-3978. The fax phone numbers for the organization where the application or proceeding is assigned is 571-273-8300 Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free)

SC
Patent Examiner.
July 6, 2006.


SRIRAMA CHANNAVAJJALA
PRIMARY EXAMINER